

REMARKS

In response to the Office Action mailed January 13, 2005, Applicant respectfully requests reconsideration.

Claims 38-48 and 50-61 were previously pending in this application. By this amendment, Applicants amend claims 38, 52 and 59 for clarification. As a result, claims 38-48 and 50-61 are pending for examination, of which claims 38, 52 and 59 are independent. No new matter has been added.

1. Telephone Interview.

Applicants and Applicants' representatives appreciate the courtesies extended by Examiner Ellis in granting and conducting a telephone interview on June 7, 2005 with Applicants' representative, Daniel P. McLoughlin. The substance of this telephone interview is fully summarized herein.

2. Claims 38-48, 50 and 51 Patentably Distinguish Over Cocke in View of Bruckert.

Claim 38 stands rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over U.S. Patent No. 3,577,189 (Cocke) in view of U.S. Patent No. 4,742,451 (Bruckert). Applicant respectfully traverses this rejection.

As set forth in Applicants' previous response, the combination of Cocke and Bruckert is improper because one skilled in the art would not have been motivated to combine the systems of Cocke and Bruckert as suggested in the Office Action. Even if this combination were proper (which it is not), any resulting combination would not teach or suggest all of the limitations recited in claim 38. Specifically, the combination would not teach or suggest an instruction fetcher operative, *responsive to execution of a set branch instruction*, to fetch a new instruction from a location indicated by the set branch instruction. Applicants explained that, rather than teaching or suggesting this limitation, Bruckert indicates that instructions are fetched from a "branch taken" instruction stream *in response to decoding a conditional branch instruction*.

In response, the Office Action cites page 22 of the book *Computer Organization*, by V. Carl Hamacher et al., published 1984 (Hamacher) as extrinsic evidence showing the alleged accepted definition of "execution" within the computer arts. The Office Action contends that Hamacher teaches that the term "execution" is defined to include all phases of processing, including instruction fetching and instruction execution. Accordingly, reasoned the Office

Action, because “execution” of an instruction is defined to include all phases of processing, it is immaterial whether Bruckert fetches a new instruction in response to decoding a branch instruction or in response to executing (in a narrower sense of the word) the said branch instruction. Applicants respectfully disagree.

During the telephone interview, Applicants explained that the Office Action’s definition of “execution” was not applicable in the context of claim 38, the application as a whole, and Bruckert. As explained during the telephone interview, claims 38, 52 and 59 make clear that executing an instruction is a separate operation from decoding the instruction. This interpretation is further supported throughout the specification, for example, in Fig. 4. Further, Bruckert clearly indicates that the decoding of an instruction by instruction decoder 51 (Fig. 2A; Fig. 4A, item 120) is a separate and distinct operation from the execution of an instruction by the execution unit 31 (Fig. 2A; Fig. 4A, Step 122). Thus, in the context of Applicants’ claims, Applicants’ specification and Bruckert, the definition of the term “execution” adopted from Hamacher is not applicable.

Examiner Ellis agreed, and suggested that Applicant amend claim 38 (and independent claims 52 and 59) to make clear that the “execution of said set branch instruction” is performed by execution circuitry. The Examiner indicated that the claims amended as such would overcome the §103(a) rejection, but would be subject to an additional search.

Accordingly, by this Amendment, Applicants amend claims 38 as shown above to recite, *inter alia*, “the second instruction fetcher is operative, responsive to execution of said set branch instruction by the execution circuitry . . . , to fetch the new instruction”(emphasis added).

In view of the foregoing, claim 38 as amended patentably distinguishes over Cocke in view of Bruckert. Accordingly, Applicants respectfully request that the rejection of claim 38 under Section 103(a) be withdrawn. Claims 39-48, 50 and 51 are patentable for at least the same reasons as claim 38. Accordingly, Applicants respectfully request that the rejection of these claims be withdrawn.

3. Claims 52-58 Patentably Distinguish Over Cocke in View of Bruckert.

Claim 52 stands rejected under Section 103(a) as purportedly being unpatentable over Cocke in view of Bruckert. Applicants respectfully traverse this rejection.

As set forth above in Section 2, the combination of Cocke and Bruckert is improper. Further, even if this combination were proper (which it is not), claim 52 would still distinguish over any such combination. Specifically, claim 52 has been amended as shown above to recite, *inter alia*, “in response to executing said branch instruction by execution circuitry . . . , fetching the new instruction from said storage circuitry” (emphasis added). As should be clear from the discussion set forth above in Section 2, no combination of Cocke and Bruckert teaches or suggests this limitation.

In view of the foregoing, claim 52 patentably distinguishes over Cocke in view of Bruckert. Accordingly, Applicants’ respectfully request that the rejection of claim 52 under Section 103(a) be withdrawn. Claims 53-58 each depend from claim 52 and are patentable for at least the same reasons. Accordingly, Applicants’ respectfully request that the rejections of these claims be withdrawn.

4. Claims 59-61 Patentably Distinguish Over Cocke in View of Bruckert.

Claim 59 stands rejected under Section 103(a) as purportedly being unpatentable over Cocke in view of Bruckert. Applicants respectfully traverse this rejection.

As set forth above in Section 2, the combination of Cocke and Bruckert is improper. Further, even if this combination were proper (which it is not), claim 59 would still distinguish over any such combination. Specifically, claim 59 has been amended as shown above to recite, *inter alia*, “means for fetching the subsequent instruction and the new instruction from the storage circuitry in parallel in response to executing said branch instruction by execution circuitry” (emphasis added). As should be clear from the discussion set forth above in Section 2, no combination of Cocke and Bruckert teaches or suggests this limitation.

In view of the foregoing, claim 59 patentably distinguishes over Cocke in view of Bruckert. Accordingly, Applicants' respectfully request that the rejection of claim 59 under Section 103(a) be withdrawn. Claims 60 and 61 each depend from claim 59 and are patentable for at least the same reasons. Accordingly, Applicants' respectfully request that the rejections of these claims be withdrawn.

CONCLUSION

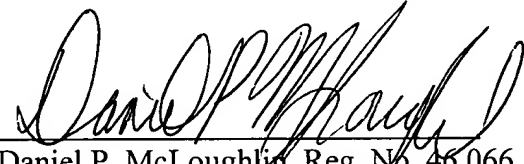
A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,

Andrew C. Sturges et al., Applicants

By:


Daniel P. McLoughlin, Reg. No. 46,066
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2206
Telephone: (617) 646-8000

Docket No.: S1022.80655US00
Date: June 9, 2005
x06/13/05x